Application No. 09/764,001
Filed: January 17, 2001
TC Art Unit: 1754
Confirmation No.: 3521

AMENDMENT TO THE CLAIMS

1. (Previously Presented) A catalyst on a support for the selective oxidation of sulfur-containing compounds to elemental sulfur, comprising at least one catalytically active material that is present on a support material, wherein the catalytically active material comprises a mixed oxide having atomically mixed iron ions and zinc ions in an oxidic lattice, which catalyst has a specific surface area of more than 20 m^2/g and exhibits substantially no Claus activity under the reaction conditions of said selective oxidation.

2-14. (Cancelled)

15. (Previously Presented) A catalyst according to claim 1, wherein the atomic ratio of iron to zinc is between 25/75 and 97.5/2.5.

16. (Previously Presented) A catalyst according to claim 1, wherein the atomic ratio of iron to zinc is between 95/5 and 50/50.

17. (Previously Presented) A catalyst according to claim 1, which catalyst has a specific surface area of more than 25 m^2/g, and an average pore radius within a range of about 100 Å to 500 Å.

18. (Cancelled)

WEINGARTEN, SCHURGIN,
GAGNEBIN & LEBOVICI LLP
TEL. (617) 542-2290

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19. (Currently Amended) A catalyst according to claim 1~~,~~ or claim 17~~ or 18~~, wherein the support is SiO_2.

20. (Currently Amended) A catalyst according to claim 1~~,~~ or claim 17~~ or 18~~, wherein the catalytically active material is present on the support in an amount of 0.1-50% by weight, calculated on the total mass of the catalyst.

21. (Currently Amended) A method for the preparation of a catalyst according to claim 1, comprising atomically mixing iron and zinc compounds for an oxide lattice, applying the atomically mixed iron and zinc compounds to the surface of a support material, followed by drying and calcination of the support material, during which calcination, an amount of chloride is present on the support material~~.~~, wherein the prepared catalyst has a specific surface area of more than 20 m^2/g and exhibits substantially no Claus activity under reaction conditions for the selective oxidation of sulfur-containing compounds to elemental sulfur.

22. (Currently Amended) A method according to claim 21, wherein the applying step comprises impregnating the support material with said atomically mixed iron and zinc compounds in solution, and further comprising, during or after the impregnation, applying an amount of chloride to the surface of the support material.

23. (Previously Presented) A method according to claim 21 or 22, wherein the amount of chloride is between 0.1 and 20% by weight, based on the amount by weight of the metals.

24. (Previously Presented) A method according to claim 21 or 22, wherein the chloride is ammonium chloride.

25. (Previously Presented) A method according to claim 23, wherein the chloride is ammonium chloride.

26. (Cancelled)

27. (Cancelled)

28. (Previously Presented) A catalyst according to claim 1, wherein said catalyst has a specific surface area of 20 to 300 m^2/g.

29. (Previously Presented) A catalyst according to claim 1, wherein said catalyst has a specific surface area of 20 to 300 m^2/g and an average pore radius within a range of 100 to 500 A°.